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NATIONAL TELECOMMUNICATIONS COOPERATIVE ASSOCIATION
The Voice of Rural Telecommunications
www.ntca.org

NTCA 2003 INTERNET/BROADBAND AVAILABILITY SURVEY REPORT

May 2003

DISCLAIMER: Data from the survey has been presented as reported.

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EXECUTIVE SUMMARY

In the spring of 2003, the National Telecommunications Cooperative Association (NTCA) surveyed its members on their activities in the area of providing broadband services and Internet access to their customers. The survey was sent to each of NTCA's 560 member companies; 203 members (36%) responded.

Ninety-seven percent of survey respondents offer broadband service to some part of their customer base. Respondents indicated that they use a variety of technologies to provide broadband to their customers, including, digital subscriber line (DSL), unlicensed wireless, fiber to the home (FTTH) or fiber to the curb (FTTC), cable modem, and licensed wireless. Take rates continue to lag behind availability: while survey respondents are able to provide service of at least 200 kbps in one direction to an average of 70% of their customers, only 7% of residential customers and 9% of business customers are currently subscribed to the LEC's broadband service.

In the short term, 47% of survey respondents indicated they intend to offer broadband to all customers within 12 kilofeet (kft) of a fiber fed node, 37% plan to make broadband available to all customers within 12kft of a central office, and 5% intend to continue to offer only dial up-service.

Two-thirds of survey respondents face competition in the provision of broadband services in their service area. Fifty-six percent of those facing competition indicated that their competitors provide service mainly to the cities and towns in their service areas; 44% stated their competitors provide service throughout their service area.

Survey respondents plan to deploy fiber to the node to an average of 68% of their customers by year-end 2003, fiber to the curb to 7%, and fiber to the home to 8%.

Chief among the barriers to broadband deployment cited by survey respondents was the cost of deploying broadband (cited by 79% of survey respondents), low customer demand (51%), excessive loop length (45%), regulatory uncertainty (40%), difficulty in obtaining cost-effective equipment (37%), current regulatory rules (12%), and obtaining financing (10%).

Two-thirds of survey respondents currently offer video services to their customers. More than half of those remaining intend to do so by year-end 2005 or sooner.

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INTRODUCTION

In April of 2003, the National Telecommunications Cooperative Association (NTCA) surveyed its members on their activities in the areas of providing broadband services and Internet access to their members/customers. NTCA is a national association of approximately 560 local exchange carriers in 44 states that provide service primarily in rural areas. All NTCA members are small carriers that are "rural telephone companies" as defined in the Telecommunications Act of 1996 ("Act"). While some offer local exchange service to as few as 44 lines and a small handful to 90,000 or more, nearly 50% of NTCA members serve between 1,000 and 5,000 lines. Population density in most member service areas is in the 1 to 5 customers per square mile range. Approximately half of NTCA's members are organized as cooperatives and the other half are commercial companies.

This latest broadband survey is a follow-up to a similar survey last conducted by NTCA in 2001[1], and seeks to build upon the results of that survey. The previous survey asked about prices charged for various types of broadband service, the deployment of fiber in the loop plant, and the respondent's distance from the Internet backbone. While there is some overlap between the coverage of the two surveys, the 2003 survey adds questions about future broadband deployment strategies, the quantity and type of competition faced in the provision of broadband/Internet, current and future plans for video services, and capital availability.

OVERVIEW OF SURVEY

The 2003 NTCA Internet/Broadband Availability Survey was conducted online. Member companies were provided with a URL through which they could access the survey. Every effort was made to minimize the reporting burden on the survey respondents.

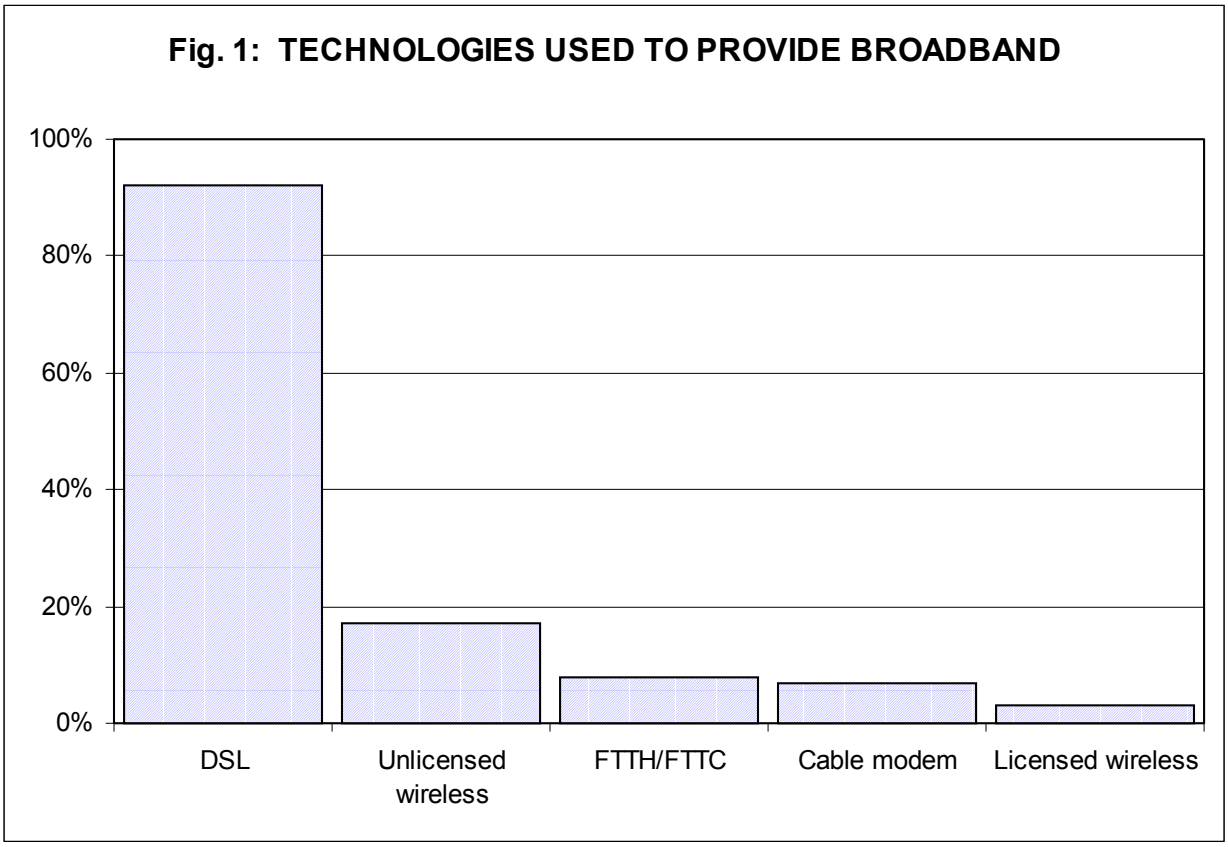
The survey itself was organized into six sections. The first section was comprised of general questions about the respondent's current operations and future plans. The second section dealt with competition; the third, fiber deployment; the fourth, video; the fifth, finance and the availability of capital; and the sixth and final section offered respondents an opportunity to convey any specific thoughts or concerns they would like NTCA to be aware of.

[1] The results of the 2001 and other surveys are available online at www.ntca.org. Following the completion of the 2001 survey in December 2001, it was decided that subsequent Internet/Broadband Availability Surveys would be conducting in the first half of each year, in order to capture year-end data. Consequently, no Internet/Broadband Availability Survey was conducted in 2002.

SURVEY RESULTS

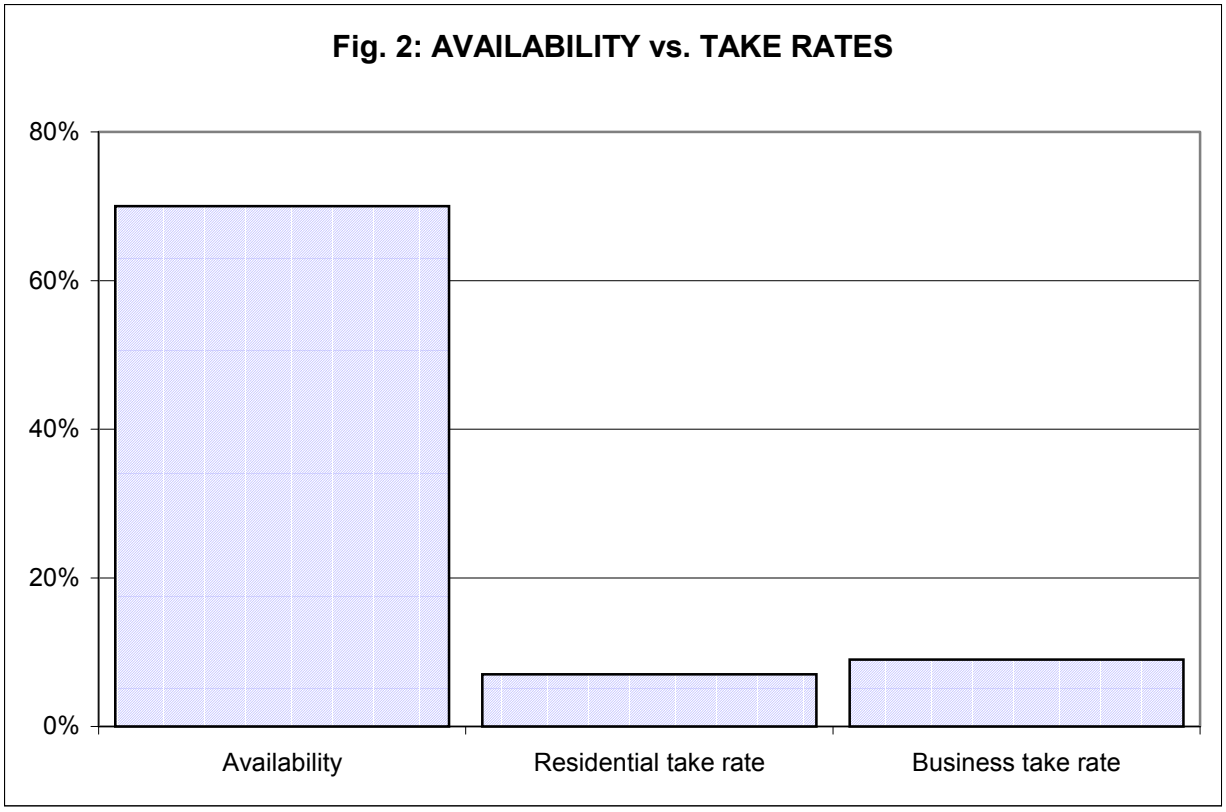
The survey URL was distributed vie email and fax to all of the NTCA member companies in NTCA's database. The messages contained instructions for online access to the survey. Responses were received from 203 member companies, a 36% response rate.

The average survey respondent serves 6098 residential and 1498 business access lines. Ninety-seven percent of survey respondents offer broadband[2] service to some part of their customer base. Respondents indicated that they use a variety of technologies to provide broadband to their customers: 92% utilized digital subscriber line (DSL); 17% unlicensed wireless; 8% fiber to the home (FTTH) or fiber to the curb (FTTC); 7% cable modem; and 3% licensed wireless[3] (see Figure 1).



[2] For the purpose of this survey, broadband is defined as thoughput of 200 kilobits/second (kbps) in one direction.
[3] Percentages sum to greater than 100% as some respondents utilize more than one technology to serve their customers.

While survey respondents are able to provide service of at least 200 kbps in one direction to an average of 70% of their customers, take rates continue to lag far behind availability. Only 7% of residential customers are currently subscribed to broadband service, and 9% of business customers (see Figure 2.)



The average cost of dial-up service is $19.60 per month. This compares with 200 kbps service, priced at $47.88 per month, and 500 kbps service, $71.61 monthly.

Respondents were asked about their future broadband deployment plans. In the short term (defined as through year-end 2003), 47% of respondents intend to offer broadband to all customers within 12 kilofeet (kft) of a fiber fed node, 37% plan to make broadband service available to all customers within 12 kft of a central office, and 5% plan to continue to offer only dial-up service.

In the long term (defined as through year-end 2005), 50% plan to offer broadband to all customers within 12 kft of a fiber fed node, 33% to all customers within 12 kft of a central office, while 4% expect to continue to offer dial-up service only.

Twenty-one percent of survey respondents currently utilize wireless broadband as a means of supplementing DSL--in other words, they utilize wireless access technology as

a means of reaching unserved broadband customers in areas where DSL deployment is not technically feasible. Thirty-three percent do not, but have considered doing so, 24% are currently considering it, and 22% have never considered it. Those respondents who are utilizing wireless are serving an average of 929 customers in this manner.

On a scale of 1 to 10, with 1 being "not important" and 10 being "essential," respondents rated the importance of providing broadband to their company's overall bottom line 7. The importance of providing broadband to their company's standing in the community was rated 9.

Competition

Sixty-six percent of survey respondents face competition in the provision of broadband services in their service area. The average respondent competes with two national ISPs, 1 cable company, and 1 wireless broadband provider. Fifty-six percent of respondents indicated that their competitors provide service mainly to the cities and towns in their service areas; 44% stated their competitors provide service throughout their service area.

Fiber Deployment

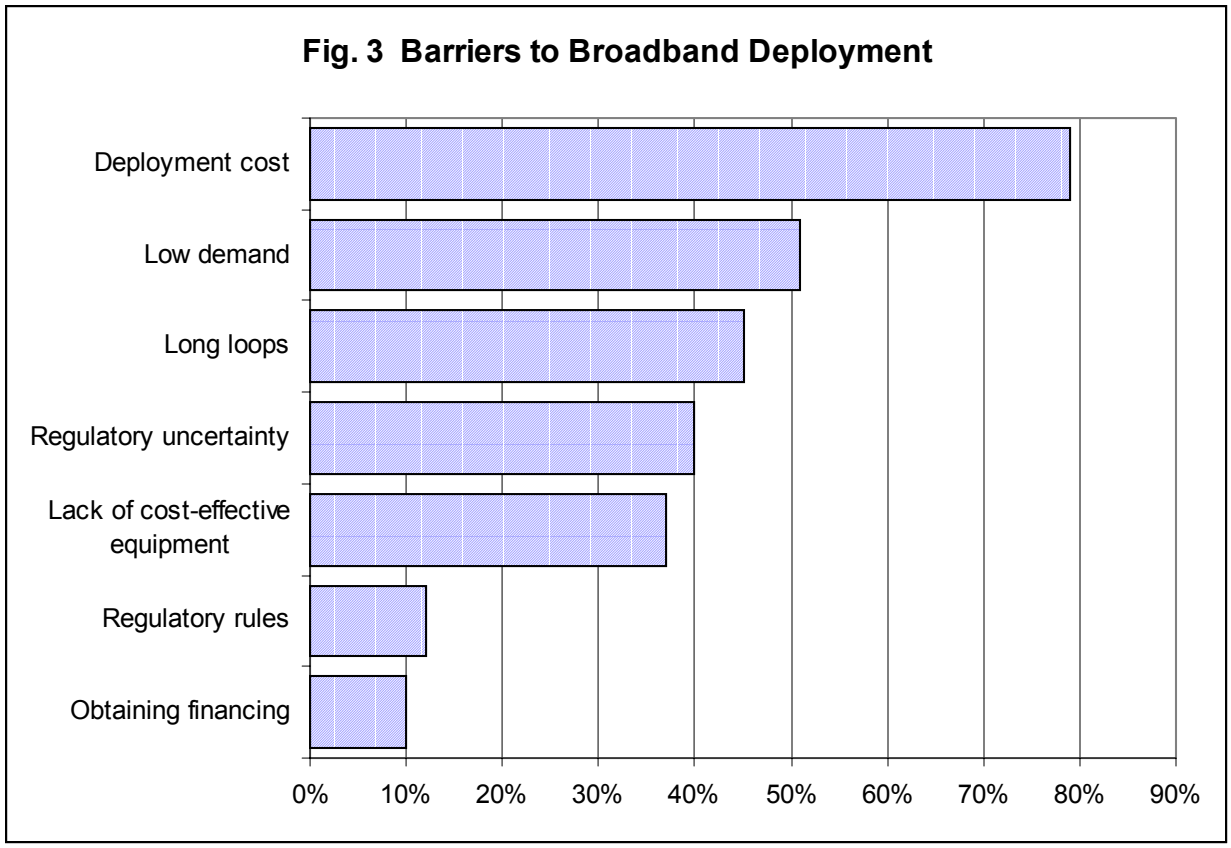
Survey respondents plan to deploy fiber to the node to an average of 68% of their customers by year-end 2003, fiber to the curb to 7% and fiber to the home to 8%. By year-end 2005, these averages grow to 76%, 15% and 13%, respectively.

Numerous barriers face those companies seeking to provide broadband service. Seventy-nine percent of respondents cited the cost of deploying broadband, 51% low customer demand, 45% excessive loop length, 40% regulatory uncertainty, 37% the difficulty in obtaining cost-effective equipment, 12% current regulatory rules, and 10% obtaining financing. (See Figure 3.) It is interesting to note that these responses were virtually identical in both the short term (through 2003) and the long term (through 2005.)

On a scale of 1 to 5, with 1 being "little or no benefits for the cost," and 5 being "significant benefits for the cost," respondents were asked to rate the current and future benefits of fiber deployment to their company versus its costs. Survey respondents rated the current benefits of broadband deployment a 3, the benefits per the cost three years from now was rated a 4.

Video

Sixty-six percent of survey respondents currently offer video services to their customers. Of those, 91% offer video under a cable franchise while 10% offer video as an Open Video System (OVS) pursuant to Part 7, Subpart S of the Telecommunications Act of 1996.



Fifty-two percent of those respondents providing video services utilize hybrid fiber coax (HFC), 27% use DSL, and 3% use radio.

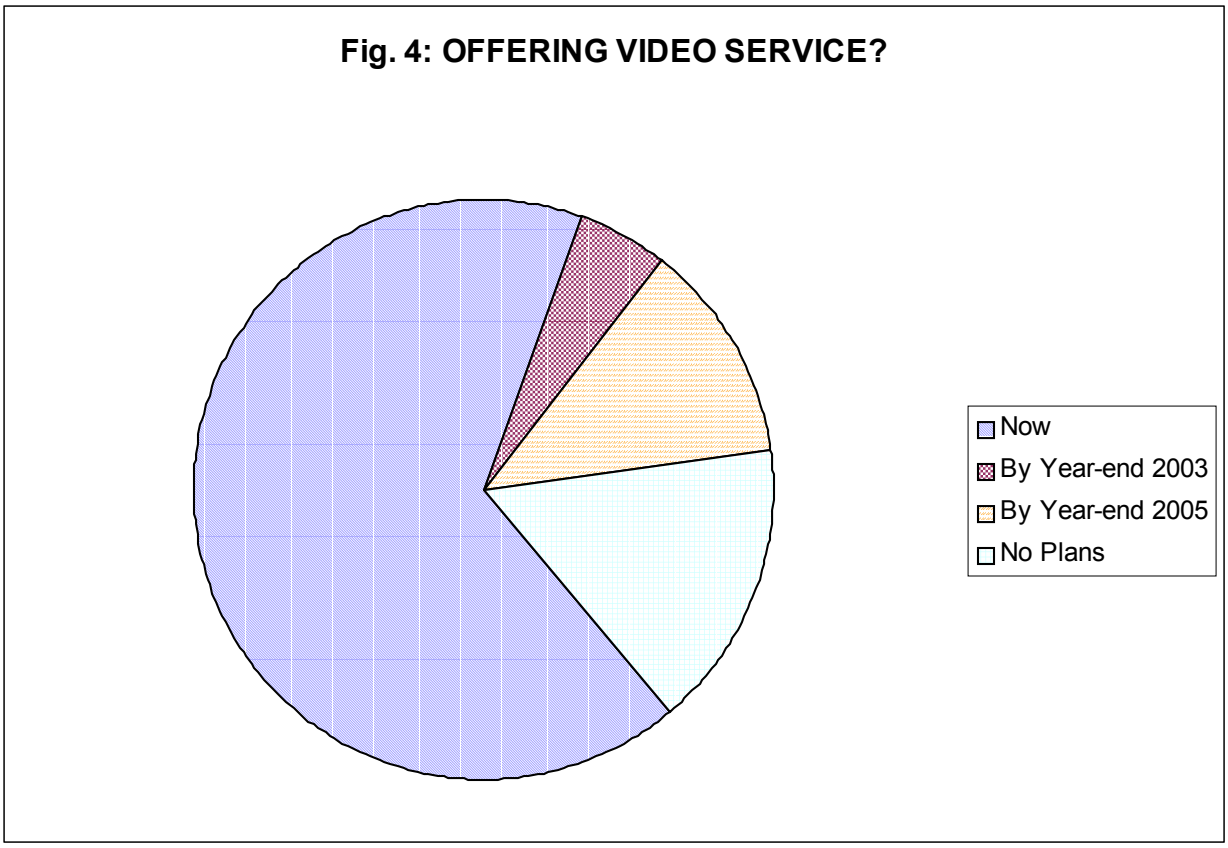
Of those respondents who do not currently offer video, 49% have no plans to do so in the foreseeable future, while 15% expect to offer the service by year-end 2003 and another 36% by year-end 2005. Forty-nine percent of these respondents expect to offer video as an OVS; 48% plan to offer video under a cable franchise. (See Figure 4.)

Finance/Availability of Capital

On a scale of 1 to 5, with 1 being "very easy" and 5 being "virtually impossible," survey respondents categorized the overall process of obtaining financing for broadband projects a 3.

Final Thoughts

Survey respondents took advantage of the opportunity provided them to speak their mind on any topic of their choice. We have collected a representative sampling of their responses in the appendix to this report.



CONCLUSIONS

Virtually all survey respondents now offer broadband service to at least some of their customers.

Ninety-seven percent of survey respondents indicate they offer broadband service to at least some part of their customer base. This is a dramatic increase from the 74% figure reported in the 2001 NTCA broadband survey. Clearly, broadband is no longer considered a luxury service—customers expect to be able to access high-speed Internet.

NTCA member companies continue to deploy fiber to their customers, despite the obstacles they must overcome in order to do so.

Survey respondents plan to deploy fiber to the node to an average of 68% of their customers by year-end 2003, fiber to the curb to 7%, and fiber to the home to 8%. This commitment to customer service is all the more impressive in light of the substantial barriers companies must make in order to deploy fiber, most notably the cost. Survey respondents indicated that while they believe fiber deployment is important today, it will become increasingly valuable in the near-term future.

NTCA members must offer broadband and other advanced services in order to successfully compete in the increasingly competitive telecommunications marketplace.

Two-thirds of survey respondents face some form of competition, and most face competition from multiple providers. As a result, it is critical that these companies, at the very least, offer a range of services equivalent to those of the competitors; optimally, success requires that they surpass the competition.

An ever-growing number of NTCA member companies are offering video services to their customers.

As NTCA member companies face increased competition in their service areas, they must be able to provide the latest services and technologies that their customers demand. This includes the ability to offer broadband video on demand. Survey results indicate that two-thirds of survey respondents currently offer video, and an additional 17% plan to do so by year-end 2005.

APPENDIX

Q: Do you have any additional comments you'd like to make regarding your company's implementation of broadband service?

Two major impediments to true broadband exist for this small rural telco. First is the high cost of transport that is a major impediment to customers purchasing higher bandwidth. Second, while our rural status has not been challenged by a CETC, that possibility, and the potential for line sharing of the high frequency portion of the line, makes the investment required quite risky with no guarantee of reasonable ROI. Current broadband regulatory vision, excluding FTTH, seems to favor privatizing the risk and socializing the reward.

Through our subsidiary we offer CATV service in our telephone community service area.

We have been very fortunate that our own funding allowed us to construct and provide these services to our members.

If DSL becomes a deregulated service, it will be difficult to continue deploying this service as we will not have the cost recovery mechanisms that assist in keeping the services somewhat affordable (but not necessarily competitively priced with larger markets in the region).

Fiber is important to move data long distances, but copper can move data short distances without the cost.

The economy has a great deal to do to with the penetration of broadband to our members. When the economy turns around we will add additional users.

We have continually deployed fiber closer to the customer (within 18 kft) and have improved the availability of broadband to our customer base. Virtually all customers have access to broadband.

Without USF Funds or the inclusion of broadband equipment in the NECA Pool, most future deployment will stall.

Customer take rates for us are directly linked to the cost to move to broadband. Most users start at the 128 kb level, not many have moved to a faster level at this time.

As a very small, very rural telephone company that offers its customers services many urban areas can only dream of, we are very concerned about our ability to continue to do that with all of the financial and regulatory uncertainty we face. More than anything, we need to know what the future holds for us regarding regulation and funding. Making the rest of the decisions would be easy if we knew that. Right now, everything we do is an act of faith.

The deployment of the broadband pipe is the more expensive part of the project. Need USF support to justify the expense.

There is definitely a politically popular factor in being able to say you have it available. We are very unsure of its importance to our customer base in our rural area, which is very low tech. The cost will probably cause a decrease in our bottom line. However, we feel it is something we must do to encourage any chances our poor, rural area has of getting new business to our area.

As a company that has always been on the leading edge of technology, we try to offer the latest in services as long as we can make a profit and the customer wants the service.

Combined with VDSL (video DSL -- Cable TV) we are offering price breaks, which aids in subscribership. We also serve wireless broadband in a Qwest area for which we do not have CLEC authority.

Broadband isn't the problem. The infrastructure to deliver it is.

We have a lot of demand for broadband services in our area due to our location near metro areas. We believe our customers will continue demanding faster and faster data speeds. For this reason, we are placing fiber to the home whenever we need to upgrade our outside plant. Unfortunately, the first fiber equipment we put in place is already manufacture discontinued and needs upgrading.

[We need] more direction from RUS for accounting.

There needs to be a "killer ap" to come up to spark greater interest. Most people don't want to pay for DSL to just surf the Internet.

We have upgraded our 12 exchanges using fiber to node sites and new filled copper cable. By the end of first quarter 2003, all members' loops will look like they are 12,000 feet from the central office. Every subscriber can be reached with broadband services or high-speed Internet if they desire.

It concerns me that our company is deploying broadband to majority of members and yet USF is going to CETCs with lesser capabilities, which receive equal amounts for inferior service. Maybe we should have just saved our money and not deployed in rural high cost areas.

We keep trying to implement DSL to as many of our customers as possible. Age demographics and remote customers are a problem.

We would like to see our take rate of ADSL go to 100% versus dial-up to make the service more economical to provide.

Through our subsidiary we offer CATV modem service, 900 and 2.4 unlicensed wireless. CATV is offered through our CATV subsidiary.

We try to stay ahead of others due to our location.

The "digital divide" is a myth in many areas. We have two wireless competitors in a town of 2,000 population.

In our evaluation of digital video, fiber to the node makes the most economic sense. Hopefully, as technology improves, with mpeg4, video over copper distances will improve.

We use fiber extensively where it makes sense. FTTH isn't a silver bullet. It has it's own problems from powering to installation cost to maintenance. It's a waste of money if there aren't applications to use the bandwidth…in other words, "build it and they will come" just doesn't cut it as an investment strategy.

Very high cost to take fiber to the remote regions of our territory. Not much demand versus cost of deployment. Waiting for satellite technology.

When it comes down to video services such as CATV in the small rural communities breaking even on this product is marginal at best. What we are doing is providing a one-stop shopping situation. In the towns we serve with telecommunications where we are not the CATV provider we are gearing up with VDSL. This is also very marginal at best. Being a cooperative our members are very interested in this service.

We have not pursued any financing for our broadband projects - we have been offering broadband for almost 5 years now - on our own. Again, the problem is not our ability to offer broadband (we've got that covered) the problem is with the lack of customer demand. It will take years to pay off our DSL investment at our current take rate. If you want to help you can do so by helping to create demand for these services. Many times customers say they want something but their ability to pay for these services (or lack there of) is never taken into consideration.

We have been, and continue to be, a leader in providing broadband services to our customers. All construction projects are engineered to expand its fiber deployment closer to the customer.

Efforts are generally based on member needs and demands.

Our video deployment is very successful and a big revenue producer when services, both regulated and non-regulated, are bundled in packages. This is the smartest deployment we have ever made.

The high reoccurring cost of the satellite Internet feed, combined with the small number of potential customers, makes it hard to come up with a viable business plan to implement broadband in the small communities we serve.

Since we have deployed broadband, government grant money for deployment by competitors is unnecessary.

We have had fiber to the node for 4 years. Not providing video to rural customers at this time. Broadband deployment should not be a question of why but rather a commitment to when.

We have spent a lot of funds reducing the length of our loops over the last 8 years and we should be complete and 98% of our loops should be less than 12 kft by the end of 2003. While most of the independents have been upgrading their networks just like us in order to provide broadband services, it would be unfair for some type of regulatory relief or funding subsidies be given to the ones that have not been working toward the upgrading of their networks. If relief is given, there should be some type of "reward" for the companies that are already deploying broadband services in rural areas.

Rural density to cost is a major problem, especially with regulatory uncertainty for sufficient support.

After a very quick and rough review of our service area, we estimated it would cost over $9,000,000 to get broadband to all of our customers. For 1,770 access lines this is neither practical nor economically efficient. We have high cost funds today, but in light of what is happening, I'm not so sure that it will be here in 10, 15, or 20 years. Every 3 years we pay a company to survey our customers. The last survey revealed that only 50% of our customers had computers and many of them did not go on-line. Many of our customers work for minimum wage

or are older persons and do not go on-line. We monitor what is happening and should things change, we stand ready to do what we can to bring broadband to our customers.

We are a rural elderly farming community that hasn't the need for all the bandwidth we provide today. We do have some younger families that are the ones coming up that have the need with children in school and those are the ones taking the service.

Our biggest concern is the availability of programming at a reasonable cost and on terms equal to those offered to the large cable providers. In addition, the programming pricing model should be changed to allow pay per view for all services in addition to monthly subscription.